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Docket No. 1232-4819

REMARKS

Applicants respectfully request reconsideration of this application in view of the foregoing amendments and following remarks.

A. Status of the Claims and Explanation of the Amendments

Claims 1 and 3-24 are pending in this application. Claims 1 and 3-24 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,571,057 to Aoki ("Aoki"), in view of U.S. Patent No. 5,430,303 to Matsumoto ("Matsumoto").

Claims 5 and 6 have been amended such that these multiple dependent claims now refer to the antecedent claims in the alternative, as required by MPEP § 608.01(n). Claims 13, 16, 19, and 20 have been amended so that they now recite the word "comprising" in the preamble instead of the phrase "characterized by." Applicants respectfully submit that no new matter has been added by these minor amendments to the claims.

B. Applicants' Claims Are Not Unpatentable Over the Combination of Aoki and Matsumoto

Applicants respectfully traverse the rejection of claims 1 and 3-24 under 35 U.S.C. §103(a) as allegedly being unpatentable over the combination of Aoki and Matsumoto for at least the following three reasons. First, the combination of references does not teach, disclose, or suggest all of the claim elements of Applicants' invention. (MPEP §2143). Second, the proposed combination would render the prior art unsatisfactory for its intended purpose (MPEP §2143.01). Third, Matsumoto teaches away from the proposed combination. (MPEP § 2145).

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1. The Combination of Aoki and Matsumoto Fails to Teach, Disclose, or Suggest All of the Claim Elements of Applicants' Claims

With respect to the teachings of Aoki, the March 22, 2004 Office Action states, *inter alia*, that

the invention of Aoki presents an optical element (39a-f) which is made from quartz or fluoride (col. 6, lines 43.52). The optical element is disposed in a container for the purpose of subjecting the element to a rinsing system and method. The rinsing system and method comprise a light emitting-unit 20 and a container 53b arranged so that the light-emitting unit 20 is outside the container 53b....As the irradiation rinses the optical element with ultraviolet rays from light-emitting unit 20, the container 53b is filled with a gas containing oxygen. (March 22, 2004 Office Action, ¶3.)

The Office Action, however, admits that "Aoki does not teach the container 53b being disposed inside of and having an internal pressure higher than an outer container." For this element, the Office Action relies on Matsumoto. The Office Action states that "Matsumoto et al. further teaches controlling the pressure of inner chamber 6a depending on the desired processing constraints (col. 6, line 61 - col. 7, line 8)."

Applicants respectfully assert, however, the proposed combination of Aoki and Matsumoto does not arrive at Applicants' invention. First, Applicants note that all of Applicants' independent claims (*viz.*, claims 1, 10, 13, and 16) recite, *inter alia*, that the inside ambience of the second container is "independent from the first container" or "different from the ambience of the first container." As explained in Applicants' specification,

the second container 700 is arranged to maintain an ambience different from that of the first container 600. The second container 700 is made of glass, stainless steel, or aluminum, for example, using no organic series material. As a result of it, even being irradiated with ultraviolet light from the lamp 610, no contaminant is produced in the inside ambience. Also, even if the contaminants are produced inside the first container 600 as a result of irradiation with ultraviolet rays, since the second container 700

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is able to maintain an ambience separate from the first container 600, contamination of the inside ambience of the second container can be prevented. (Applicants' specification, page 13, lines 13-26, emphasis added).

The separation between the first and second container, such that each has a separate ambience, has a purpose. Applicants note on page 7, lines 19-23 of the specification that "[w]ith this arrangement, the possibility of contamination inside the second container due to contaminants produced from organic substances within the first container, can be avoided effectively."

In contrast, the Office Action's proposed combination of the ozone generating system of Aoki and the inner and outer chamber of Matsumoto fails to provide two chambers where the ambience of each chamber is "different" or "independent", as recited in Applicants' claims. Instead, the inner and outer chambers of Matsumoto are connected such that there is a flow of air between inner chamber 6a and outer chamber 6 which is caused by air-conditioning system 7. As discussed in Matsumoto, "an air flow exists in the chamber 6 by the air conditioning conducted by the air conditioning system 7, so that impurity eliminating filters FL may be positioned in the path of said air flow. The air-conditioning system 7 is composed of a temperature regulator 8, a fan 9, a HEPA filter 10 etc." (Matsumoto, col. 7, lines 24-30).

With such an air flow in Matsumoto's system, the ambience of the inner chamber and the outer chamber cannot be "independent" or "different" as recited in Applicants claims. Moreover, Applicants, upon review of Matsumoto and Aoki, do not see any teaching, express or otherwise, of an inner and outer chamber with "independent" or "different" ambiances, as recited in Applicants' claims.

Applicants also note that the combination of references fails to teach, disclose, or suggest "a second container [that] has an internal pressure higher than the first container," as recited in

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claims 21-24, notwithstanding the assertion of the Office Action to the contrary. As shown in Figures 2 and 3 of Matsumoto, air is circulated within chamber 6 by air-conditioning system 7, such that it flows through the inner chamber 6a. Because air must flow from a region of high pressure to a region of low pressure, if inner chamber 6a were to have an internal pressure that is higher than that of chamber 6, as recited in Applicants' claims, the air in chamber 6 would not flow into inner chamber 6a, as indicated by the curved arrow at the bottom right portions of Figures 2 and 3. Because air does, in fact, flow from outer chamber 6 to inner chamber 6a according to Figures 2 and 3, Matsumoto's inner chamber 6a cannot have an "internal pressure that is higher" as recited in Applicants' claims.

2. The Proposed Combination Would Impermissibly Render the Prior Art Unsuitable for Its Intended Purpose

Applicants respectfully assert that the combination of Aoki and Matsumoto would impermissibly render Matsumoto unsuitable for its intended purpose. (MPEP § 2143.01). Specifically, the proposed combination would degrade Matsumoto's apparatus and lead to contamination problems that Matsumoto's apparatus is designed to reduce.

The problems with the proposed combination become evident when one considers that ozone and oxygen atoms are capable decomposing organic substances (see, e.g., Matsumoto, col. 1, line 66 to col. 2, line 5; and Matsumoto, col. 2, lines 53-55) and that the "impurity eliminating filters" of Matsumoto (which are used for removing contaminants that cause haze (see e.g., Matsumoto, col. 7, lines 54-66) are made of polypropylene, an organic material (Matsumoto, col. 8, lines 5-8). Applicants assert that if one were to construct and operate an apparatus according to the proposal set forth in the Office Action, the ozone and oxygen atoms generated for the

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cleaning step described by Aoki would be circulated by the air-conditioning system 7 of Matsumoto. The ozone and oxygen atoms would come into contact with the polypropylene filters and degrade them over time, such that impurities would eventually be able to reach the surface of the optical member. Even worse, as the filters degrade, they may also become an independent source of organic contamination in the system.

In summary, the proposed combination renders Matsumoto unsuitable for its intended use by destroying Matsumoto's contamination-minimizing measures that are employed to reduce optical haze. For at least this reason, Applicants feel that this combination is not proper and that the rejections of claims 1 and 3-24 under 35 U.S.C. §103(a) should be withdrawn.

3. Matsumoto Teaches Away from the Proposed Combination

In addition to the foregoing analysis, Applicants respectfully submit that Matsumoto teaches away from the combination proposed by the Office Action. This is evident when one considers the different approaches that Aoki and Matsumoto employ to minimize contamination in the system. Specifically, whereas Aoki appears to use ozone to clean optical members that have already been contaminated (see Aoki Fig. 2), Matsumoto uses "impurity eliminating filters" to prevent contamination in the first place, and tries to avoid the generation of ozone. In particular, Matsumoto states that

[o]xygen in the air is converted by the UV irradiation into radical oxygen or ozone, which accelerates decomposition and ionization of particles and gas. Consequently, the ozone generation can be suppressed by nitrogen replacement of the atmosphere. Such reduced ozone generation decreases the ionized particles resulting from such ozone, and also prevents the deterioration in the UV resistance and in the optical performance of the glass and its coating, resulting from the influence of ozone. (Matsumoto, col. 13, lines 34-44, emphasis added).

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Thus, because Aoki employs ozone to clean optical members, while Matsumoto teaches that ozone is not desirable and should be minimized, Applicants believe that one of ordinary skill in the art would not be motivated to combine these two references in the manner proposed by the Office Action, and that Matsumoto teaches away from the proposed combination. (See MPEP §2145). Accordingly, Applicants respectfully request the reconsideration and withdrawal of the rejections of claims 1 and 3-24 under 35 U.S.C. §103(a).

In summary, Applicants assert that the combination of references fails to teach, disclose, or suggest all of the claim elements of Applicants' independent claims. Moreover, although Applicants have focused the discussion on the independent claims, Applicants respectfully assert that the dependent claims are patentable for at least similar reasons. Accordingly, the rejection of claims 1 and 3-24 under 35 U.S.C. §103(a) should be withdrawn.

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CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. , Order No. 1232-4819. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. , Order No. 1232-4819. A DUPLICATE OF THIS SHEET IS ATTACHED.

Respectfully submitted,
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Dated: June 22, 2004By: 

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